

REMARKS

The pending claims 1-4, 7, 8, 12-27, and 29-32 stand rejected under 35 U.S.C. §103. The Examiner relied primarily on U.S. Patent Number 6,622,168 issued to Anindya Datta on September 16, 2003 (Hereinafter the '168 patent).

In the recent Office Action, the Examiner indicated that the submitted declaration of the inventor under 37 CFR 1.131 antedating this reference is ineffective to overcome the reference. Included herewith is a new affidavit that conforms to the requirements of 37 CFR §1.131.

In the declaration, the inventor declares that the invention was reduced to practice prior to the earliest effective filing date of the prior art reference. Additionally, the inventor was diligent in filing the patent application from that date until the actual filing date of October 12, 2000.

Absent the '168 patent, the §103 rejections should all be withdrawn, as each rejection of the claims relies on the '168 patent for essential elements of the §103 rejection. Consequently, Applicants respectfully request that the §103 rejection be withdrawn and this case be promptly allowed.

'168 PATENT IS NOT AVAILABLE AS A PRIOR ART REFERENCE

[0001] The Examiner rejected the pending claims under 35 U.S.C. §103(a) in view of the '168 patent. This rejection is respectfully traversed.

[0002] Applicants respectfully assert that given the filing date of the present application (October 12, 2000) and the facts regarding the '168 patent, the '168 patent is not available as prior art under 35 U.S.C. §103(a) for reasons set forth below.

[0003] A reference can only qualify as prior art under §103(a) if the reference's earliest priority date predates the date of invention of the present application.

[0004] The earliest possible priority date is April, 10, 2000 which is prior to the filing date, October 12, 2000, of the present application. Thus, the '168 patent qualifies as prior art against the present invention, unless the date of invention predates the date of the publication.

Applicants respectfully assert that the date of invention for the claimed invention predates the '168 patent as evidenced by the attached affidavit.

[0005] Included herewith is an affidavit under C.F.R §1.131 by the inventor and supporting evidence including IBM disclosure document entitled "Disclosure SJO8-1999-0443" (hereinafter the IBM disclosure). The affidavits submitted herewith establish that the date of invention was at least as early as December 10, 1999. Therefore, the date of invention predates the '168 patent's earliest possible priority date of April, 10, 2000. Therefore, the '168 patent is overcome by the affidavit such that 35 U.S.C. §103(a) does not apply.

[0006] Applicants can establish a prior date of invention by proving Reduction To Practice (RTP), conception coupled with due diligence and RTP, or conception coupled with due diligence and constructive RTP. 37 C.F.R. §1.131 generally, requires four elements: first, that the affidavit "...establish possession of either the whole invention claimed or something falling within the claim (such as a species of a claimed genus), in the sense that the claim as a whole reads on it." MPEP §715.02. Second, the facts or data relied upon to establish completion of the invention should be set forth. 37 CFR §1.131(b). Third, Applicants should include a clear explanation of the exhibits including what facts are established and relied on thereby. Finally, the Applicants should include an allegation establishing where the acts relied upon establishing a prior date of invention occurred in this country, or a NAFTA or WTO country within the proper time periods.

[0007] Applicants will address the 37 C.F.R. §1.131 requirements in reverse order. First, Applicants assert that the actions memorialized in the IBM disclosure and any attachments occurred in this country as the inventor worked at an International Business Machines (IBM)

facility located in San Jose, CA, in the United States of America. Second, the IBM disclosure is a document created as part of an invention submission process internal to IBM. The document includes various questions with answers provided by the inventor or co-inventors. The remaining co-inventors also have an opportunity to revise and add to the IBM disclosure, if necessary.

[0008] In addition, the document includes various dates, some provided by the inventor or co-inventor, other dates are placed on the document in an automated fashion as the document is processed. Certain of these dates (such as "created on," "last modified on," "printed" in the lower right-hand corner, and "archived on") are used herein to further establish that the present invention predates the prior art reference. The slides included as Exhibit B were submitted as attachments to the IBM disclosure and therefore form a part of the IBM disclosure. Exhibit C is a copy of search results obtained and received after the IBM disclosure was completed. Exhibit D is a letter to outside counsel authorizing preparation of a patent application directed to the invention described in the IBM disclosure.

[0009] In addition, the IBM disclosure includes a section entitled "Main Idea." This section includes a more detailed description of the invention and may include attachments, such as Exhibit B, that further clarify and explain the invention. This section may include its own page numbering, and may be printed as a separate document.

[0010] Applicants submit that the present invention was reduced to practice as evidenced by the IBM disclosure. The facts and data relied upon are discussed below.

[0011] The present invention was reduced to practice by at least as early as December 10, 1999. This fact is established by the inventor's answer to question 1 provided near the middle of

page 2 as the date the invention was workable. This fact is further established by the inventor's answer to item 4 just above question 1 on page 2. In response to item 4, the inventor indicates that a working prototype was created on December 10, 1999. Applicants submit that this working prototype is clear evidence of reduction to practice.

[0012] Applicants further submit that the IBM disclosure "...establish[es] possession of either the whole invention claimed or something falling within the claim" as required under 37 C.F.R. § 1.131. Specifically, on pages 1 and 2 of the main idea section, the main elements of the broadest claim, Claim 1, are described. On page 2 under numbered item 2, the inventor describes a process of using estimated single reference residency times "to model the utility of keeping prefetched data for I/O streams...expected to benefit from cache prestaging." At the top of page 2, the inventor relates the idea of remotely modeling a cache such as an LRU cache which corresponds to the first element in Claim 1. In particular, the inventor refers to operation across a physical boundary. Operation across a physical boundary is evidence of the "remote" operation concept included in claim 1.

[0013] The inventor goes on to explain that a computer model is used to model an LRU cache which corresponds to elements one and two of Claim 1. Then, the inventor explains that the prefetch "count" recorded in the computer model serves as the basis for invoking an actual prefetch into the LRU cache being "remotely modeled." See numbered item 2 on page 2 of Exhibit A/IBM disclosure. Applicants respectfully assert that this invocation of an actual prefetch corresponds to "making a cache management decision" as that phrase is used in claim 1. This concept is further evidenced on slide five of Exhibit B. Consequently, the Applicants

submit that claim 1 reads on the description provided in both Exhibits A and B (explained below).

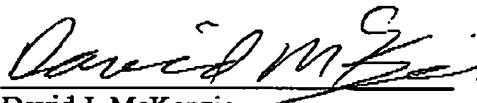
[0014] In the affidavit, the inventor establishes that Exhibit B is an attachment of Exhibit A as Exhibit B is referenced in the Exhibit A as evidenced by the note on page 4 in the box labeled "Features to be searched:." Exhibit B was included in the search request. Therefore, Exhibit B was created at least as early as January 14, 2000 as evidenced by the date the search request was sent indicated on page 4 in the box labeled "Date sent:." Exhibit B was also provided to present and clarify the concept of the present invention to an internal patent review board.

[0015] Exhibit B provides further proof of the completion of inventor's invention and further describes aspects included in the main claim, Claim 1. Specifically, slides 7-9 describe specific steps of the present invention. For example, slide 7 describes in the first two bullets, the three method steps (determining cache size and periodically fetching the hit ratio, cached I/O rate and estimate of the SRRT) set forth in claim 7, that depends from claim 1. Still on slide 7, the fourth bullet is incorporated into claim 14 (prefetching if a dynamic threshold is exceeded). On slide 8, the third bullet is incorporated into claim 18 (adjusting the internal model if alternate prefetch criteria values are available). Slide 9 describes the inputs (cache size, periodic – hit ratio feedback, cached I/O rate feedback) and outputs (prefetch candidates identified, optimal prefetch threshold identified, and value of prefetching quantifiable) for a method implementing the inventor's invention.

[0016] Applicants further submit that elements of the claims not specifically described in the IBM disclosure or any attachments are obvious to one of ordinary skill in the art, so long as the IBM disclosure and any attachments are provide to the one of ordinary skill in the art.

[0017] In view of the foregoing, Applicant submits that the application is in condition for immediate allowance. In the event any questions remain, the Examiner is respectfully requested to initiate a telephone conference with the undersigned.

Respectfully submitted,



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